

REMARKS

Claims 1-14 and 19-23 are now pending in the application. Claims 1-3, 5-14, and 19-23 have been rejected. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

DRAWINGS

Applicant has attached revised drawings for the Examiner's approval. In the "Replacement Sheets," Applicant has replaced hand-drawn elements and leader lines with computer generated leader lines to make formal, non-substantive changes to the drawings. Applicant respectfully requests that the "Replacement Sheets" be approved and entered in the present application.

ELECTIONS/RESTRICTIONS

The Outstanding Office Action states that Applicant elected Fig. 13 and 5-7. However, Applicant elected the species in Figs. 1, 2, 3, and 5-7. It appears as though "Fig. 13" in the Outstanding Office Action is a typographical error and instead should be "Figs. 1-3." Regardless, Applicant respectfully requests further clarification from the Examiner on the elected species if this is not in fact a typographical error.

Additionally, the Outstanding Office Action states that Claim 4 is withdrawn as being drawn to a nonelected species of Fig. 4. However, Claim 4 is not drawn to the nonelected species of Fig. 4. Fig. 4 (Figs. 4A-4C) contains various resistive layer patterns such as rectangular (Fig. 4A), circular (Fig. 4B), and spiral (Fig. 4C), and Claim 4 is directed to a thermally sprayed heater without language or limitations

directed to any of these resistive layer patterns. Claim 4 is instead drawn to the elected species of Figs. 1, 2, 3, and 5-7. Therefore, Claim 4 should not be withdrawn and Applicant respectfully requests that Claim 4 be examined with the remaining claims in the present application.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 6, 11, 14, and 19-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juliano et al. (U.S. Pat. No. 5,973,296) in view of Godwin et al. (U.S. Pat. No. 6,305,923). This rejection is respectfully traversed.

Claims 1-3, 6, 11, 14, and 19-23 include a resistive layer that is **both** a heater element **and** a temperature sensor. Neither Juliano et al. nor Godwin et al. include a resistive layer that is **both** a heater element and a temperature sensor. As noted by the Outstanding Office Action, Juliano et al. requires a **separate** layer as a temperature sensor, and Godwin et al. similarly requires a **separate** temperature sensor. Since neither Juliano et al. nor Godwin et al. disclose or teach a resistive layer that is both a heater element and a temperature sensor, these claims cannot be obvious.

As stated in the specification, (paragraphs [0032] and [0034]), the advantages of using the resistive layer as both a heater element and a temperature sensor include using only a single set of electrical leads rather than one set for the heater and one set for the temperature sensor, thus drastically reducing the bulk and complexity of a heating system. Furthermore, since the entire resistive layer is a temperature sensor, temperature is sensed throughout the entire heater element rather than at a single point as with many conventional temperature sensors such as

a thermocouple. There is clearly no teaching of such a system in Juliano et al. or Godwin et al., and thus the Applicant respectfully requests that these claim rejections be withdrawn.

Claims 4-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juliano et al. in view of Godwin et al. and further in view of Miyata et al. (U.S. Pat. No. 6,448,538). This rejection is respectfully traversed.

Similar to the claims discussed above, Claims 4-5 include a resistive layer that is **both** a heater element **and** a temperature sensor. None of the cited references disclose or teach a resistive layer that is both a heater element and a temperature sensor, and thus Claims 4-5 distinguish over these references for at least the reasons as stated above. Accordingly, Applicant respectfully requests that these claim rejections be withdrawn.

Claims 7-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juliano et al. in view of Godwin et al. and further in view of Haas (U.S. Pat. No. 6,770,848). This rejection is respectfully traversed.

Claims 7 and 8 depend from Claim 6 and distinguish over these references for at least the reasons stated above in connection with Claim 6. Namely, none of the cited references disclose a resistive layer that is **both** a heater element **and** a temperature sensor. Accordingly, Applicant respectfully requests that these claim rejections be withdrawn.

Claims 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juliano et al. in view of Godwin et al. and further in view of Lumsden (U.S. Pat. No. 6,489,742). This rejection is respectfully traversed.

Claims 9 and 10 depend from Claim 6 and distinguish over these references for at least the reasons stated above in connection with Claim 6. Namely, none of the cited references disclose a resistive layer that is **both** a heater element **and** a temperature sensor. Accordingly, Applicant respectfully requests that these claim rejections be withdrawn.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Juliano et al. in view of Godwin et al. and further in view of Waggoner (U.S. Pat. No. 6,752,491). This rejection is respectfully traversed.

Claim 13 depends from Claim 6 and distinguishes over these references for at least the reasons stated above in connection with Claim 6. Namely, none of the cited references disclose a resistive layer that is **both** a heater element **and** a temperature sensor. Accordingly, Applicant respectfully requests that these claim rejections be withdrawn.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the Outstanding Office Action, and as such, the present application is in condition for further prosecution. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7524.

Respectfully Submitted,

Dated: 12 Nov 04

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AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheets" of drawings include changes to Figures 1-13. The attached "Replacement Sheets," which include Figures 1-13, replace the original sheets including Figures 1-13.

Attachment: Replacement Sheets